

Inexpensive, Rugged and Compact Tunable Laser with Simple Tuning Control for Airborne Fiber Optic Sensor (FOS) Interrogators, Phase I

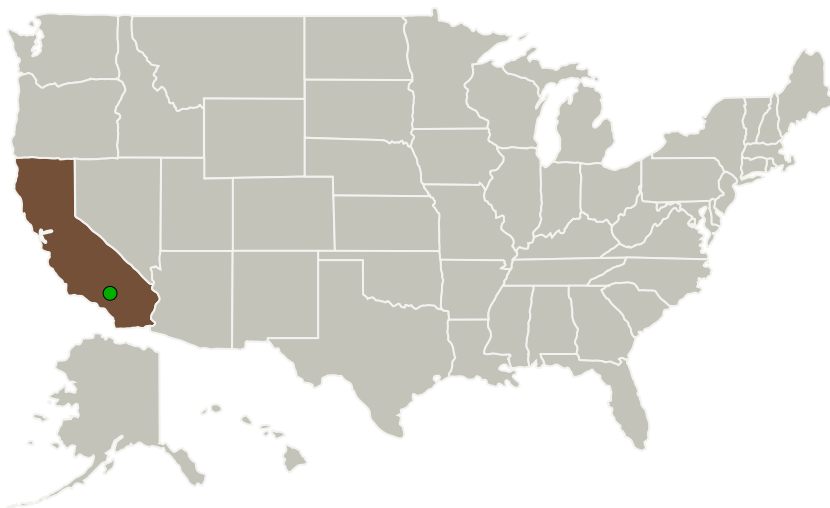
Completed Technology Project (2016 - 2016)



Project Introduction

Dryden (Armstrong) Flight Research Center has developed a 4-fiber interrogation system for Fiber Optic Smart Structures (FOSS) sensor networks interrogation. Replacing the expensive, bulky, mechanically tuned swept laser technology used in the FOS system will help reduce the system cost, size and weight, and enable massive deployment. In this program, Freedom Photonics proposes to develop a novel, inexpensive semiconductor based widely tunable laser, which can be tuned using simple tuning algorithms and control.

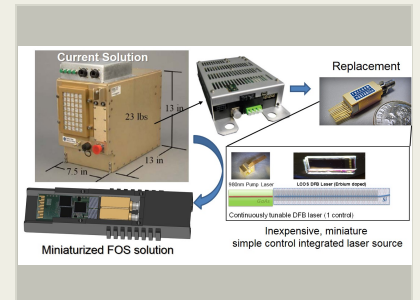
Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Freedom Photonics, LLC	Lead Organization	Industry	Santa Barbara, California
● Armstrong Flight Research Center(AFRC)	Supporting Organization	NASA Center	Edwards, California

Primary U.S. Work Locations

California



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Project Transitions

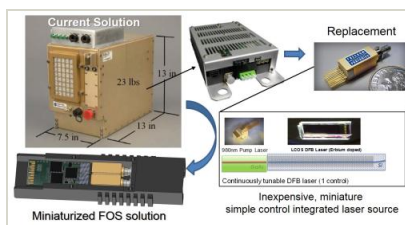
June 2016: Project Start

December 2016: Closed out

Closeout Documentation:

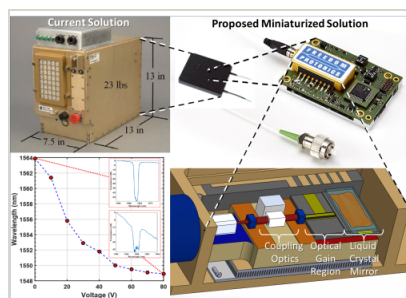
- Final Summary Chart(<https://techport.nasa.gov/file/139753>)

Images



Briefing Chart Image

Inexpensive, Rugged and Compact Tunable Laser with Simple Tuning Control for Airborne Fiber Optic Sensor (FOS) Interrogators, Phase I
(<https://techport.nasa.gov/image/127208>)



Final Summary Chart Image

Inexpensive, Rugged and Compact Tunable Laser with Simple Tuning Control for Airborne Fiber Optic Sensor (FOS) Interrogators, Phase I Project Image
(<https://techport.nasa.gov/image/126377>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Freedom Photonics, LLC

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

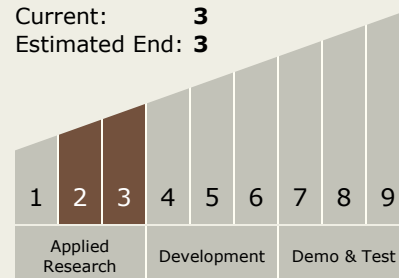
Carlos Torrez

Principal Investigator:

Gordon Morrison

Technology Maturity (TRL)

Start: **2**
Current: **3**
Estimated End: **3**



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Technology Areas

Primary:

- TX08 Sensors and Instruments
 - └ TX08.3 In-Situ Instruments and Sensors
 - └ TX08.3.4 Environment Sensors

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System